DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, JUNE 8, 1850. NO. 12.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

AGRICULTURAL STATISTICS.

WE hope that more care will be observed in taking the agricultural census this year, than was the case in 1840. Some years ago we published an article showing the gross errors of that census. It is far better to have no agricultural statistics taken, than to have them so erroneous. In many respects we can guess far nearer the true items than is the marshal's census, and certainly guessing would be a more economical mode.

Our attention was called to this subject a few months ago, at the State House, when Mr. Morse was reading the report of the Committee of Supervision of the poultry exhibition, before the meeting for forming a New England Poultry Association. We are astonished that the good sense of the committee had not led them to detect the great errors in the poultry statistics, or those of other items with which they compared them. But instead of this, they gave currency to them, and they have been copied into papers, and into Dr. Bennett's Poultry Book without comment as to the most glaring errors ever published.

In the committee's report it is stated "that the value of poultry in the state of New York was more than the value of its sheep, the entire value of its neat cattle, and nearly five times the value of its horses and mules." What absurdities! Did the committee, and others who gave currency to them, look or think beyond the fallacious figures?

Now, let us examine this statement. New York is mostly an agricultural state; and in the cities and large towns, where little or no attention is paid to agriculture, the value of horses exceeds that of poultry in a far greater proportion than in the rural sections.

Generally, in the country, each farmer has twenty head of cattle, worth $25 each, making a total of $500, where he has $25 worth of poultry. And in case the farmer has only half that value in cattle, he will usually have not more than half the value in poultry, making, as we should guess, the neat stock worth at least twenty times as much as the poultry. And instead of the poultry being worth nearly five times as much as the horses and mules, we believe that farmers average one to two horses, worth $100, while they would not average $20 worth of poultry. Then, if we are correct, instead of the poultry being worth five times as much as the horses and mules, they are worth five times as much as the poultry; making the value of poultry only one twenty-fifth part as much, in proportion to the value of the horses and mules, as has been stated. We have said enough to show the absurdity of relying upon figures, when they are so far from the truth, that a little reflection must show the error. The good sense of the observing farmer will support us in our guess-work. The reader will please to consider that we have estimated fowls at usual prices before this *mania* prevailed, that has led to speculation and deception, and consequently given a fictitious value to common and mongrel stock.

LATE CROPS.

As the spring has not only been backward, but there has been much wet weather, which has prevented farmers despatching their business with usual expedition, in such seasons, and as moist lands are too wet to work, and in some cases the seed is rotting in the ground, it is impossible for farmers to attend to their usual crops in due time; therefore, as an expedient, they should raise late crops in order to get their usual amount of produce.

Canada corn, and other kinds of early corn, may be planted as late as the 10th or 12th of June. Frequently good crops may be obtained with so late planting; and if it is only partially ripe, it may be cut on the approach of frost, and stooked, and it will make sweet bread.

Potatoes generally bear late planting well; but since their liability to rot, if planted late, it should be on dry land, both to forward their growth, and prevent injury from heavy rains in the fall, before harvesting. When planted late, it is desirable to plant early kinds. Last year, we planted early potatoes late in the season, and they obtained a full growth in season for digging the former part of September, so that they rotted but little.

Early beans will usually ripen well when planted as late as the middle of June. The Merrimachee, or Pierce bean, and Bremen, or large white six weeks bean will bear planting a fortnight later than the small pea bean; and they yield about as much, and sell about as high in the market; generally, the former sells higher than the pea bean. These two varieties are white, and well adapted to field culture; and their early ripening is frequently an important advantage.

Turnips may be substituted for other root crops which could not be planted in season. The early turnip beet, the Bassano, and the Early Sugar will yield good crops when sown as late as the middle or 20th of this month, if the seed be soaked a few days before sowing. These roots are of excellent quality, both for the table, and for stock; and by sowing a little nearer than usual, a large crop may be obtained.

Late vegetables, when there is time for their growth and maturity, generally yield the largest crops; but when it is too late to plant them with a fair prospect of success, it is better to attend to early kinds, which in urgent cases may come in with great advantage to supply the deficiency.

In some cases, buckwheat may be substituted for other grain, and it may be sown as late as the last of June. Farmers should not be discouraged from the tardiness of the season. With judicious management, they can yet plant with a fair promise of reaping.

SALT AS MANURE.

Common salt is a compound, consisting of the two simple elements, chlorine and sodium; three parts of the former to two of the latter. The inorganic elements, or those substances which plants take up from the earth, are usually reckoned fourteen, two of which are supplied by salt. In some plants, chlorine and sodium are rather prominent, and in others they are small.

In the ashes of one thousand pounds of wheat, there are, of different elements, 11.77 pounds in the grain, and 35.18 pounds in the straw. In the grain are 2.40 pounds sodium, and .10 pounds of chlorine. In the straw are .29 pounds sodium, and .30 pounds chlorine.

In the ashes of one thousand pounds of red clover (dry) are 5.29 pounds sodium, and 3.62 pounds of chlorine.

We do not suppose that these results of chemical analysis are, in every respect, correct, but they are doubtless near the truth. As the simple elements of salt constitute important component parts of plants, it is a good manure where these elements do not already abound.

On old lands, these elements become in a measure exhausted, unless restored by the application of salt manures, or the free use of salt hay on the farm; or on lands near the sea, salt in sufficient quantity may be supplied by salt spray. In some cases of high winds, in severe storms, the salt spray is carried considerable distance inland, so as to affect seriously some kinds of trees, and other vegetable productions. So it is evident that some lands are greatly improved by the application of salt, while others are already abundantly supplied with it. Again, some plants require a large quantity of salt, or those simple elements of which it is composed, while others contain but very little in their composition. This is like a thousand other subjects in agriculture. We have before us a vast field for experiments, with numerous variations and modifications from soil, climate, season, crops, and other circumstances.

On most lands, and for most crops, salt is a good manure, and its utility, in point of economy, depends on its price, the price of other manures, the price of produce, &c. On old lands, it is valuable for destroying insects, and in England it is frequently used for this purpose, even where it has no important beneficial effects as a manure.

Various quantities of salt are applied as a manure, according to the crop; usually from five to ten or fifteen bushels. From five to seven bushels to the acre, for turnips and cabbages, has an excellent effect in destroying worms, and promoting the growth of the plants. It is an excellent manure for all the turnip and cabbage tribe, and similar plants, such as mustard, &c.

Salt is a good manure in old orchards for all kinds of fruit-trees. Apply eight or ten bushels to the acre. For plum-trees, twenty bushels to the acre, or half a peck to a square rod. Asparagus requires more salt than any other plant we cultivate. A suitable quantity is one hundred and sixty bushels to the acre, or one bushel to a square rod. Dock mud, or other salt manure, may be cheaper than salt, and if it cost much, it will not be profitable to use it so liberally.

We cannot give definite rules for the use of salt, nor show the precise advantage to the crop in its use. We have used a mixture of wood ashes, salt, and plaster in turnip drills, only a moderate dressing, and obtained as large a crop of turnips as from decomposed stable manure and ashes, and the cost, both of the manure and the application, were much less. But we cannot say how much each ingredient increased the crop. We have tried each substance separately, with an equal expense to each drill, without any satisfactory result, otherwise than each seemed to be nearly equally beneficial.

Will our readers who have made any useful experiments on the use of salt, give us the result of their experience.

Getting Good by doing Good. — Benevolence is a fundamental law of our moral being; and the man who labors for his fellow-men secures thereby the gratification of his most commanding principles of action; but he who labors for himself alone, stirs up against his own peace some of the most operative elements of his worst nature.

Burr Millstones. — The Burr millstones produced in Georgia are said to be fully equal to the best French.

GARDEN ENGINE.

This is a very useful machine, constructed on the principle of the fire engine. It may be moved to any part of the premises, and worked by one person; and some engines are so constructed as to conveniently admit of the aid of several persons. With a good machine, water may be thrown fifty to sixty feet, and it is very useful for watering gardens, washing windows, &c., and for protecting buildings against fire. It is also excellent for syringing trees and shrubbery, with various kinds of liquid preparations, for the destruction of insects. These engines are fitted with suction hose, to draw water from wells, reservoirs, &c., which may be done while they are in operation in discharging water. The price of good machines is from $30 to $35.

SHEPHERDIA.

In regard to inquiries concerning the Shepherdia or Buffalo berry, we remark that its native place is the Rocky Mountains, and it is perfectly hardy and flourishes well in Maine. The price is probably about fifty to seventy-five cents each, according to size. They should be set in pairs — one staminate, the other pistillate — from six or eight feet apart, which will allow them room to grow, to twelve or fifteen feet.

The two kinds can be distinguished by the leaf or bud; the pistillate having a long slender leaf, while the staminate has a shorter leaf, approaching nearer the oval form. The form of the buds corresponds with that of the leaves. This is ornamental as a plant, and the fruit, which grows only on the pistillate tree, is very beautiful, and excellent also for preserves.

If these shrubs, of good size, are well transplanted the last of September or the first of October, they will grow the next season, as though they had not been moved, and probably bear fruit also the first year. It is propagated by seeds. Besides its utility for ornament and fruit, as a shrub it makes a good ornamental hedge.

For the New England Farmer.

ELEMENTS OF SCIENTIFIC AGRICULTURE.

Mr. Cole: An essay with this title, by Prof. Norton, has found favor with the New York State Agricultural Society, and will soon be given to the public through the medium of their annual publication. If we do not mistake, it will be found admirably well adapted to instruct those who are inclined to learn. Simplicity of language and distinctness of illustration are its prominent characteristics. The author has, in a good measure, happily avoided the use of technical and unusual terms. No treatise of the kind, so well suited to form the basis of agricultural instruction in our public schools, has come to our knowledge. We trust it will be found highly useful as a text-book for popular instruction.

Many things are here stated as simple elements, the demonstration of which has been the result of much observation and labor. It not unfrequently happens, that the most useful truths when known and distinctly stated, awaken surprise, that they should have so long passed without notice. One of the greatest obstacles to the acquisition of agricultural science, has been the forbidding garb in which it has been arrayed. But our object is not to write an essay, but to call attention to one that has been written. P.

Danvers, *May* 30, 1850.

CATTLE DESTROYED BY EATING WILD CHERRY.

Deacon Joseph Wadsworth, of North Becket, recently had three cows and two steers poisoned by eating the twigs of the black cherry. The first died in two days, and the last lived eleven days after eating the cherry.

We have been for years aware of the fact, that there was abundance of poison in the cherry. It contains considerable prussic acid, which is among the most deadly poisons. Many have supposed that nothing but the wilted leaves were dangerous; but the poison is in the green leaf as well as the wilted. In the summer, creatures will not ordinarily eat the green leaf, but the wilted leaf is eaten readily. — *Berkshire Culturist*

For the New England Farmer.

CHARRING AND SETTING FENCE POSTS.

Mr. Cole: I observed in your present volume, page 148, an article taken from the American Farmer recommending charring the but-ends of posts for fence. Now, as the public may be deceived as I once was, I will say a word about this matter. "Experience" is said to be the best "schoolmaster." When I was a lad, my father made a set of bars at the end of a lane leading to the cow-pasture. One of these bar-posts outlasted the other two or three times over; at last, the good post, which had lasted so long, was, by accident, turned out of the ground by running the cart against it, whereupon it was found that the post had been charred as far as it went into the ground. This fact, corroborated by others, led me to conclude with great certainty that charring would add greatly to the durability of posts, burning them as far up as they were set in the ground. Now, as I was about to build a garden fence and a barn-yard fence in the spring of 1818, I cut and split, out of the very best of white oak timber, a sufficient quantity for this purpose. These posts were all charred with great care to five or six inches above the surface of the ground when set. But to my great surprise and disappointment, all had to be renewed in seven years.

In 1819, I set about two hundred and fifty posts to fence through the swamp, peat-muck soil; all of these posts, without charring, are good to this day, thirty-one years' standing. We have another fence about seventy rods, set in 1830. These posts are on upland, set chiefly top-ends in the ground, all of which are sound, with the exception of a very few, which were broken by a severe wind this spring. But on examining these broken posts, it is found that they were set but-end down.

Now, I am inclined to believe, so far as I have tried the experiment of charring, it has been not only a considerable item of expense, but has been a serious damage to the durability of the timber. Perhaps, if I had allowed my posts to season perfectly before they were charred, and then burned the top-ends of the timber instead of the buts, and set all my posts top-end down, I might have been more successful.

It has been my invariable rule for more than twenty years to have all my posts set top down; — but my men are sometimes careless, and set a post the same end down as it was grown in the woods; but these usually tell the stupidity of the workmen in fifteen or twenty years, by breaking off at the surface of the ground. How long posts are to last in the ground, top down, must be left for time to determine. Twenty-one years in coarse, porous, sand does not yet tell either in regard to *oak* or *cedar*. Perhaps, some of your correspondents may give some information on each of the foregoing points, and will greatly oblige a lover of improvement by communicating the same.

Respectfully yours,

JOHN M. WEEKS.

West Farms, near Middlebury, Vt., *May* 6, 1850.

For the New England Farmer.

CORN FODDER.

Mr. Editor: Various opinions have been given on the utility of corn to be cut green and given to milk cows for the purpose of increasing the *quantity* of milk. I was induced last season to try the experiment; so far, at least, as to satisfy my own mind in relation to it. The comparison, you will perceive, was made between dry hay and green corn. The result of the trial was as follows: —

Aug.	6,	the weight of the milk was		98¼	pounds.
"	7,	"	"	94¾	"
"	8,	"	"	97	"
"	9,	"	"	101	"
"	10,	"	"	102¾	"

Monday and Tuesday, (6th and 7th,) the cows were fed wholly on hay. On the 8th, they were fed partly on hay and partly on corn; on the 9th and 10th they were fed entirely on corn in the morning, with a foddering of hay at night. The milking was done wholly by myself, and at the same time each day, and carefully weighed. The pasturing was the same during the whole time, which was rather poor, inasmuch as it was very dry. Whatever difference there was in the weight of the milk, I think, must have been made by the feed given them. The comparative cost of the corn and hay I have no means of *knowing*, but I *guess* the corn cost the least. My pasturing is such that I must have something upon which to feed my cows, and I have for years raised corn for that purpose. I shall commence planting for fodder about the 20th inst., and again about the 30th, and so on about once a week till the 1st, or perhaps the 10th of July, which will furnish fodder from about the 1st of August to about the 1st of October, or till the frosts come.

D. MERILL, 2d.

Methuen, Mass., *May* 10, 1850.

For the New England Farmer.

CARROTS.

Mr. Editor: I was much pleased with a communication in your paper of April 27, headed "Cultivation of Carrots," and I agree with the writer, Mr. Holbrook, on their value as an article of food for stock — horses, as well as cows. For five winters past, I have used them for my horses, and they appear in as good flesh and condition in the spring as when I gave them grain.

In my manner of cultivation, I differ somewhat from the plan recommended by Mr. Holbrook. When I commenced raising carrots, I was told by persons of more experience in farming than myself, that I should not sow them before the first of June, as I could then plough in a crop of weeds before sowing, and should not have so much weeding to do after the carrots came up. This plan I tried till I was satisfied it was not the best one. The method I now pursue, and which has given me less trouble than any other, is as follows: About the first of December, I select a piece of land that has been cultivated the previous summer, plough subsoil, and harrow it. I then cart on, and spread evenly over it, forty loads, thirty bushels to the load, of compost manure, it having been previously prepared by being beat up very fine, — plough it in as deep as a single horse plough will do it, and let the land remain in a rough state during the winter; as soon as the frost is out of the ground in the spring, say by the 20th of April, I plough, harrow, and sow my seed. By this method I get through with the second weeding before haying comes on, and the carrots get an early start before the ground becomes dry, which frequently happens before the middle of June. My first weeding I do mostly with the hoe; but the second is done very carefully by hand, thinning the roots at the same time to six inches apart, in the rows. My bed I make as level as possible, and I put the rows fourteen inches apart.

Last year I harvested eleven hundred bushels per acre, at a cost of six and a half cents per bushel,

which I consider the cheapest crop a farmer can raise for his stock.

The reason so many farmers get discouraged and discontinue raising roots, is because they sow them so late that the weeding time comes on while they are engaged in haying, which they do not like to leave; consequently the young plants are overgrown, and by the time they can be attended to, it is too late, and their crop is ruined. I use a seed-sower procured of Messrs. Ruggles, Nourse & Mason, which I like very much, as it does the work perfectly. O.

Billerica, *May* 15, 1850.

For the New England Farmer.

OLD TREES IMPROVED BY CULTIVATION AND GRAFTING.

Many farmers neglect to do aught to their old trees, lest they make a bad matter worse; but old trees, that are not too much decayed, may, by grafting, be brought to bear excellent fruit. Effectually to bring this about, the land about the trees should be well cultivated: if the whole surface is not broken up where the orchard stands, the ground, at least, around the trees should be spaded up; and better to forward the growth of the trees, potatoes may be planted, after having the land well manured. This plan followed up while the process of grafting is going on year after year, the owner will soon have the satisfaction of seeing his old decaying apple-trees presenting beautiful tops, and loaded with choice fruit.

When I first moved out on the farm I now occupy, there was an old apple-tree standing in one corner of the door-yard, which was of little consequence as it then was, although it bore pretty plenty of apples, but were scarce worth harvesting. Four years ago I commenced cutting off the top, and inserting scions; I put in but few the first year, (which was done merely for an experiment;) these thrived so well, I was induced to repeat the operation. The tree had a large branching top, capable of receiving about one hundred and fifty scions. The operation was performed in three different years. I have now the pleasure of seeing a tolerably thrifty tree, with a nice top of grafted fruit. Last fall I had about a peck of apples, and the tree this spring bids fair to reward me for my labor. For four successive years I have grafted in an old orchard of one of my neighbors, which consisted of about one hundred trees. Part of the orchard has been repeatedly cultivated, while the rest has been spaded up around the trees, and the same planted to potatoes. Some of the first grafted trees present tops sufficiently large to bear the present season, while others are coming on nicely. In the same lot, separated only by a private road, is another orchard of the same size, and trees of the same age, which have been left to take care of themselves, with the exception of an occasional trimming. The difference in the appearance of the two orchards is perceptible nearly as far as the trees are visible. The one that has been nursed and taken care of looks thrifty and flourishing, while the other has a sickly and decaying look. Now, mark the difference in the views of the two individuals, owners of the orchards. One is for putting his trees in a condition to be of benefit to others, if he does not live to take the good of them himself. The other is of the opinion, that as he is becoming advanced in years, and not likely to live to reap the benefits in *his* day, he will leave his trees to take their own course. Supposing all were of this opinion, supposing *our* fathers had been of the same opinion, what would have been the state of our farms, when left to us? Is it right to suffer our property to go to decay, because we are not likely to live to enjoy it? Should we not feel interested for our children, as our fathers have done for us? Certainly. Then let us take care of our orchards — improve our old trees if they are worth it — if not, transplant new ones, and if *we* are not benefited by them, we shall have the gratification of having left something for our children, and those that come after us. ALBERT TODD.

Smithfield, R. I., 1850.

For the New England Farmer.

BONE DISORDER IN COWS.

Mr. Editor: Lest your readers weary of the repeated articles on this subject, this shall be the last from my pen, unless I have something to communicate of more importance than at present. I can add nothing new to what I have said — I have no theory to maintain — all I wish is, that the true cause of the disorder may be ascertained, and if it be eventually proved that the one suggested by yourself and your correspondent is the true one, I shall be as ready to admit, as I have been to question it. I do not doubt that a peculiar disease exists, in some sections of this country, in milch cows, and that bone meal has been successfully used as a remedy. The symptoms and the cure of the disorder, I suppose, are well known to the farmers whose cows are thus affected. But I cannot yet see — perhaps I require stronger proof than the nature of the case admits — that the disorder is owing to the want of sufficient phosphate of lime in the food of cows afflicted with it.

Your correspondent, Mr. Putnam, has given some interesting information respecting this disease; but in attempting to trace it up to the want of phosphate of lime, he does not, in my view, connect the one with the other as an effect with a cause. I will not again cite examples from his communications in proof of this — but will merely, in conclusion, refer him, for the statement made by me, that Indian corn contains seventeen per cent. of phosphate of lime, to the essay on that grain, by Mr. Flint, which, together with an essay by himself on the same subject, is to be found in the transactions of the Essex Agricultural Society for 1849. The analysis there given was the authority I consulted; and approved as this essay has been by our own society, and by the New York State Agricultural Society, I need not, I suppose, cite any other authority. At all events I leave the subject here, hoping that sooner or later some new light may be shed upon it.

ALLEN W. DODGE.

Hamilton, *May* 13, 1850.

For the New England Farmer.

SETTING FENCE POSTS.

Mr. Editor: I have for some time been satisfied of the economy in setting posts for permanent fence in lime mortar. I have proved the plan, and give it my sanction, for *permanent* record in your *paper*. Air-slaked or refuse lime (at ten cents per bushel) answers; and the cost except labor is not over one cent per post. We dig the holes with a spade, and have two semicircular pieces of sheet iron to put down round the post, and after filling inside with mortar and outside with earth, draw up these pieces, and the work is done for many years. It dries hard as stone, and remains "in statu quo." I set the *top-end* down. BENJAMIN WILLARD.

Lancaster, *May* 21, 1850.

For the New England Farmer.

WHITE SHANGHAE FOWLS.

Mr. Editor: In a recent communication to your paper on the "White Shanghaes" it is stated that they are a separate breed of fowls. Will your correspondent, or some gentleman versed in feathered genealogy, give us his authority? The statements of your correspondent contain several errors in point of fact, which are likely to mislead those who are interested in fowl-breeding.

1st. The importation of Capt. A. S. Palmer was made in 1846, and not in 1843.

2d. It consisted of eight *red* Shanghae fowls, and no *white ones*, and is believed to be the earliest importation made, as Capt. Palmer's ship was the third American vessel that visited the port of Shanghae after it was thrown open to American commerce.

3d. The White Shanghae fowls spoken of as lost by Squire Dixon are purely fabulous as a distinct breed. As this stock multiplies, white ones come by laws yet undiscovered, as they do among almost all other races of fowls, however purely bred.

4th. Squire Dixon's stock is not mongrel, but is as pure now as when first imported; so much so, that they are considered by Capt. Palmer equal to an importation made by him this spring. The fowls of the Dixon stock grow as large as any of the fresh importations. They are extensively scattered in Rhode Island, and in the adjoining towns in this state. It is quite common for the farmers to have a Shanghae cock with their common breed of fowls. The cross has very much increased the size and quality of the poultry brought to our markets.

If there is a distinct species of White Shanghae, it is not known to Capt. Palmer. We venture a prediction that the White Shanghaes mentioned in the communication, if they are pure blood, will turn out some fine red chicks in the course of the summer.

STONINGTON.

May 30, 1850.

Note. — The error as to the date of Capt. Palmer's importation was corrected by Mr. Morse, in our last number. — Ed.

FARMING ECONOMY.

Messrs. Editors: Twenty years ago it was a common saying among farmers, that all a man could make in farming was enough to support his family, and, possibly, save a hundred or two hundred dollars a year besides. Farmers who held this idea were, no doubt, honest; they only judged of the profits of farming from their own management. Even now, a great many farmers suppose that in order to make money by farming, they must do all the labor themselves; they say they "can't afford to hire help." This is evidently a great mistake, for if the farmer makes his own labor profitable, he could make that so which he hires, under good management, and without that, no labor can be profitable.

Labor in this country is high, in proportion to what it is in older and more populous countries; but I do not regard this as a subject of regret, for who is "worthy of his hire" if the day-laborer is not? If the high price of labor operates against the interest of some, it tends greatly to improve the condition of the masses. As a matter of course, the farmer will save as much manual labor as possible, consistent with the proper cultivation of his farm.

But a great point in farming economy consists in the adoption of labor-saving machines and improved implements. Yet a good deal of hand labor will always be required to carry on farming advantageously.

The question is often asked whether capital laid out in farming can be made to *pay*. In reply, I would say, I have known many instances where money laid out in this way has paid well. It is true, that *time* is required for this result; but I believe that capital invested in farming need never pay less than six per cent.; and under good management, it may yield even eight to ten per cent. on the original stock. The culture of fruits — such as apples, pears, peaches, &c. — often yields a profit of eight to fifteen per cent.

A great barrier to improvement in farming is the erroneous value which farmers often put on *money*. They seem to think that a dollar is worth much more than its equivalent in wheat, or any agricultural product. This leads them to hoard their cash with scrupulous care, fearing to trust the earth with the loan of a cent — the risk being so much greater, as they say, than on deposits in banks. This difficulty can only be removed by demonstrating to the farmer the certain success of a better system of management; which will gradually inspire confidence that labor and money expended on the soil shall not go unrewarded.

L. DURAND.

Derby, Ct., *Feb.*, 1850.

— *Albany Cultivator.*

BREAKING ROCKS BY FIRE.

Messrs. Editors: While perusing the February number of the Cultivator, I observed a statement from one of your correspondents in regard to the manner in which he cleared his land of stones. His mode was to excavate a large hole upon one side of the boulder, and partially under the rock, which he wished to remove, and then roll it in. I think the process might well be replaced by one which is much more economical. Your correspondent observes that it is very hard to drill some "hard-head" rocks — an assertion which I truly confirm, having been engaged in the business myself, for weeks in succession, upon my father's farm, in Lewis county, New York.

In 1843, we were clearing a piece of ground of stone by the aid of the drill and powder. One very cold day, a fire was built upon a rock, which was, perhaps, four feet in diameter, near the wall where we were at work. By means of the heat there were large scales loosened on the top of the rock, which were taken off with a crowbar, and used for filling up the centre of the wall.

Subsequent to this, a fire was built upon the same rock; and some time after, the scales being removed, it was ascertained that the rock was broken through in two different directions, dividing it into four nearly equal parts.

The quarters being left with face sides, fitted them admirably for laying into wall. From this time henceforth, the drill was dispensed with. Experiment showed that one man could carry a sufficient quantity of wood to break any rock, which a farmer might be desirous of removing from his fields. Another great advantage was, that wood of little value, such as old pieces of rails, stumps, and the like, might be used with advantage and economy.

There is one point which must not be neglected, if success is expected; that is, to keep the rock clear of shells while heating. To do this with facility, the tools required are a sharp iron crowbar, and a pair of large tongs. As soon as any shells are found to have started up, the fire should be removed with the tongs, and the scales carefully taken off with the bar. This is the only secret in the process. The object is, that the heat may be applied directly to the solid rock. The fire should then be replaced with the tongs, and so on until the stone is broken. Throwing on cold water is superfluous.

One man can attend twenty of the fires, or one man can perform as much work in this as ten will with drills. The beauty of the process is, that it is performed comparatively without danger or expense.

DENNIS JOHNSON.

Mt. Airy Ag. Institute, Pa., *Feb.*, 1849.

We have seen rocks broken by the process above described, and we endorse what our correspondent says in regard to it. — Eds. — *Albany Cultivator.*

A FULL STOP TO THE BLEEDING OF GRAPE-VINES.

Mr. Editor: I devote a few moments of my time to inform all cultivators of the grape how to put a complete and final *stop* to the bleeding of the vines, whether from pruning or accident: I should like to say more about the grape, but have not the time just now.

Two or three years since, in the month of May, I was overhauling my vines and tying them up for the season, when I found the pruned ends bleeding profusely. I was surprised at this, as the vines were trimmed in December previous, before covering them for the winter. My better half, Mrs. J., heard me *grumbling* at something amiss, so I told the occasion of my perturbation, and she immediately set to work to find a remedy. This remedy *was found* forthwith, and a comical one it is. Here it is, without more ado. Take a little atom of cotton batting, as large as a bean; dip this into "*Turlington's Balsam of Life*," and bind it with three or four turns of thread over the pruned end or eye, first wiping the bleeding part dry. If this does not stop the flow of sap in twenty-four hours, drop on a little more of the "Balsam," and it *will* stop, certain.

It was supposed that the *balsam* would do what nothing else will, effectually, from the fact, that, notwithstanding the saliva, and general moisture of the mouth and tongue, yet the balsam of life will cling fast for many hours to the tongue and interior of the mouth: so, notwithstanding the profuse flow of sap from the vine, which forces through sealing-wax, bits of bladder, and every thing else, yet the balsam *stays put*, and closes up the pores.

I have tried it repeatedly, and again three days since, with uniform success. I *know* it will answer, and I know that many a cultivator of the grape-vine will thank us for the information. Try first, and laugh afterwards. Sat verbum — (or verbum sat?)

A. J., Jr.

Wiscasset, *May* 11, 1850.
— *Maine Farmer.*

CORN SUCKERING.

Your correspondent "J. J." of Centreville, New Jersey, wishes information in regard to suckering corn. If corn hills are four feet apart each way, and not more than three stocks in a hill, there will be no necessity of suckering the corn, for the increase, and the excellence of the suckers for fodder, will fully compensate the injury done the maturing of the crop by their growth, and the expense of suckering will be saved. If corn has been planted close, it can be suckered and thinned out soon after the suckers make their appearance, and from that time on, till the ears are set, provided it is carefully done. Dry weather is the best time to sucker or thin out corn. I will not go inside of my cornfield when the corn is wet, if I possibly can avoid it. I plant from four to six acres of corn every year; the hills are four feet apart each way, and six grains in a hill. After I have finished ploughing, and the corn is about two feet high, I begin to sucker and thin out as fast as a yoke of oxen will consume the forage, taking out the weaker stalks and suckers from the largest hills, reserving the smaller, as need may require, to feed my oxen — and so continue on until I have gone through the entire lot, leaving but three stocks in a hill. In this manner, I get a vast amount of feed, and cannot see any perceptible detriment to my crop of corn, as the yield appears to be about as good as my neighbors', on the same kind of land. I would advise J. J. to *succor* his corn by suckering out the hills as soon as the suckers are from six to eight inches high; but it should be done carefully. The fewer stalks there are in a hill, the larger will be the ears; and so of consequence with suckers. In proportion as the hot sun gains access to the roots of the corn, after a soaking rain, so will the ears increase in size. If corn don't stand too thick on the ground, and hands are scarce and wages high, and there is other urgent work to do, it would be as well to let nature take her course, and the suckers to grow. P. F. W.

Newportville, Bucks Co., *July* 24, 1850.
—*Dollar Newspaper.*

MOVABLE FENCE.

Eds. New-Yorker: I have become a subscriber to your valuable paper, and would wish to make a suggestion in regard to fences, since the subject is so often referred to by your correspondents. Mr. Langworthy will recollect the miniature length of fence exhibited at the Monroe County Fair, in 1844, (I think.) This kind of fence has been used to some extent, in this neighborhood, and found to do well, as no part of it is to be in the ground. It is made as follows: —

Saw straight-grained stuff of any hard wood six inches wide and one and a half thick; saw other the same thickness, four and a half feet long, seven inches wide at one end, and four inches wide at the other; cut with a saw across the wide end, (and eight inches *from* the end,) one fourth inch deep, and split off so as to form a shoulder. Then cut your six by one and a half stuff, three feet long; clap the wide end of the other on to this three foot piece in such way as to form a capital T inverted, (thus ⊥,) nailing them strongly together; bore two and a half inch holes at proper distances through this tapering piece for rails to pass through, having the lower rail pass through both pieces. Saw the rails two inches square, and fourteen or sixteen feet long, having a piece of inch board, with corresponding holes to slip on to the middle of each length or panel. Set these ground or cross-pieces on flat stones, so that they will rest on the stones at each end — cap with inch stuff six inches wide. If you wish to have a movable fence, make each panel by itself; or if stationary, then bore the holes immediately above each other. J. H.

Adams's Basin, *March*, 1850.
— *Rural New-Yorker.*

The Season. — Our spring here has been unusually cold and backward; up to the middle of May we had rarely a warm spring day; but it has been a fine season for planting, and all have had a long and favorable time for completing their improvements. The weather now, May 16, is fine, and fruit-trees are loaded with blossoms, promising a most abundant crop. The thinning process will very generally have to be resorted to, if no untimely frost or other accident occurs after this date. — *Genesee Farmer.*

A VETERINARY COLLEGE.

By the following article it will be seen that Drs. Dadd and Hurliman propose to establish a Veterinary College in this city. As to the great utility which would result from an establishment of this character, none will dispute. We need a place where men who design to become practitioners in the veterinary art, can learn, under skilful direction, the theory and practice of this profession.

There is no reason why a business of so much importance, both in the cause of humanity and in a pecuniary consideration, should be left to chance or ignorant pretension, while it may be enlightened by science, and improved by practice, as well as any other system or pursuit.

We trust that gentlemen who are in favor of public improvement, and contributing to the relief and comfort of our domestic animals, that conduce so essentially to our necessities and pleasure, will give to this enterprise a liberal support.

We have occasionally spoken of Dr. Dadd, and his reformed mode of practice, by which harsh modes of treatment, and violent means, falsely called remedies, are dispensed with, and the animal is treated with humanity, and in accordance with reason and common sense; allowing the operation of the wonderful restorative powers of nature, assisted with good management and mild means.

Dr. Hurliman is a graduate from the celebrated Veterinary College at Munich, in Switzerland. We hope that the intelligence and zeal of these gentlemen, with the coöperation and liberal aid of the public, will lead to the establishment of an institution that will be an honor to our country, from its highly favorable and practical influences.

Subscriptions in accordance with the following proposals will be received at this office.

PROPOSALS FOR ESTABLISHING A VETERINARY COLLEGE AND INFIRMARY IN THE CITY OF BOSTON.

The undersigned, *Veterinary Practitioners* of the city of Boston, respectfully call the attention of the people in New England to the lamentable fact, that the humane and praiseworthy science that teaches man how to ameliorate the condition of our domestic animal is totally neglected. That in consequence of this neglect, many thousands of our most valuable animals die prematurely, occasioning not only individual, but also national, losses. Cruelty, and ignorance in the treatment of disease in domestic animals, have been more destructive than the pestilential sword, and will continue to exercise their devastating influence on the animal kingdom, until veterinary knowledge shall be diffused.

The undersigned have abundant testimony to prove that the great mortality, among horses in particular, may be prevented. The records of the Veterinary Colleges of England, France, and Germany also prove this fact; and that a knowledge of Anatomy, Physiology, Pathology; the proper management in the stable and out of it; the proper method of feeding, shoeing, watering, grooming, &c., are the media through which many millions of valuable animals have been saved from certain destruction.

The Almighty has endowed that noble animal, the horse, with all those moral powers, differing from ours, not in kind, but only in degree. They, like us, have memory, ideas of reflection, reason, feelings of gratitude, and duty; and it should be the pride and duty of every man to sympthize with those who, though our slaves, have common feelings with us; the interest of every man speaks the same language. Hence the American people, to whom we appeal, have great encouragement, as interested individuals, to aid us in diffusing veterinary information. The beneficial results of such information will be, that the diseases of horses, cattle, and sheep will be better understood, and the dreadful loss which this country sustains will very soon be materially diminished. The veterinary science is efficient in itself, and has given unequivocal proofs of its ability to enlarge the boundaries of general medicine. It has lately acquired an importance, and received such improvements, as predicts a great revolution in this branch of knowledge.

The undersigned propose to erect a suitable College edifice and Infirmary, similar to those now established in Europe. This we propose to do by the aid of voluntary contributions, for which purpose we respectfully solicit donations. If seconded by liberal contributions, our success will be immediate, and the people of New England will be enabled, with pride, to point to an institution devoted to the cause of humanity.

GEO. H. DADD, M. D., V. S.
DR. I. I. HURLIMAN, V. S.

PROSPECTUS.

Privilege of Subscribers. — A subscription of one hundred dollars and upwards will entitle the subscriber to send, when sick or lame, any number of horses to the Veterinary Infirmary, during such subscriber's life, provided said horses are his own personal property. No charges are made either for medicine, attendance, or operation; the subscriber merely paying for the keeping and shoeing of said horses. In cases where it is impracticable to remove such horses from the subscriber's stable, they will receive daily medical attendance, without charge.

A subscription of twenty dollars entitles the subscriber's horses to medical treatment for one year, subject to the same rules as above.

The subscribers to this institution will have the privilege of visiting the infirmary, museum, &c.; and any information relating to the managing of domestic animals will be communicated by the Professors.

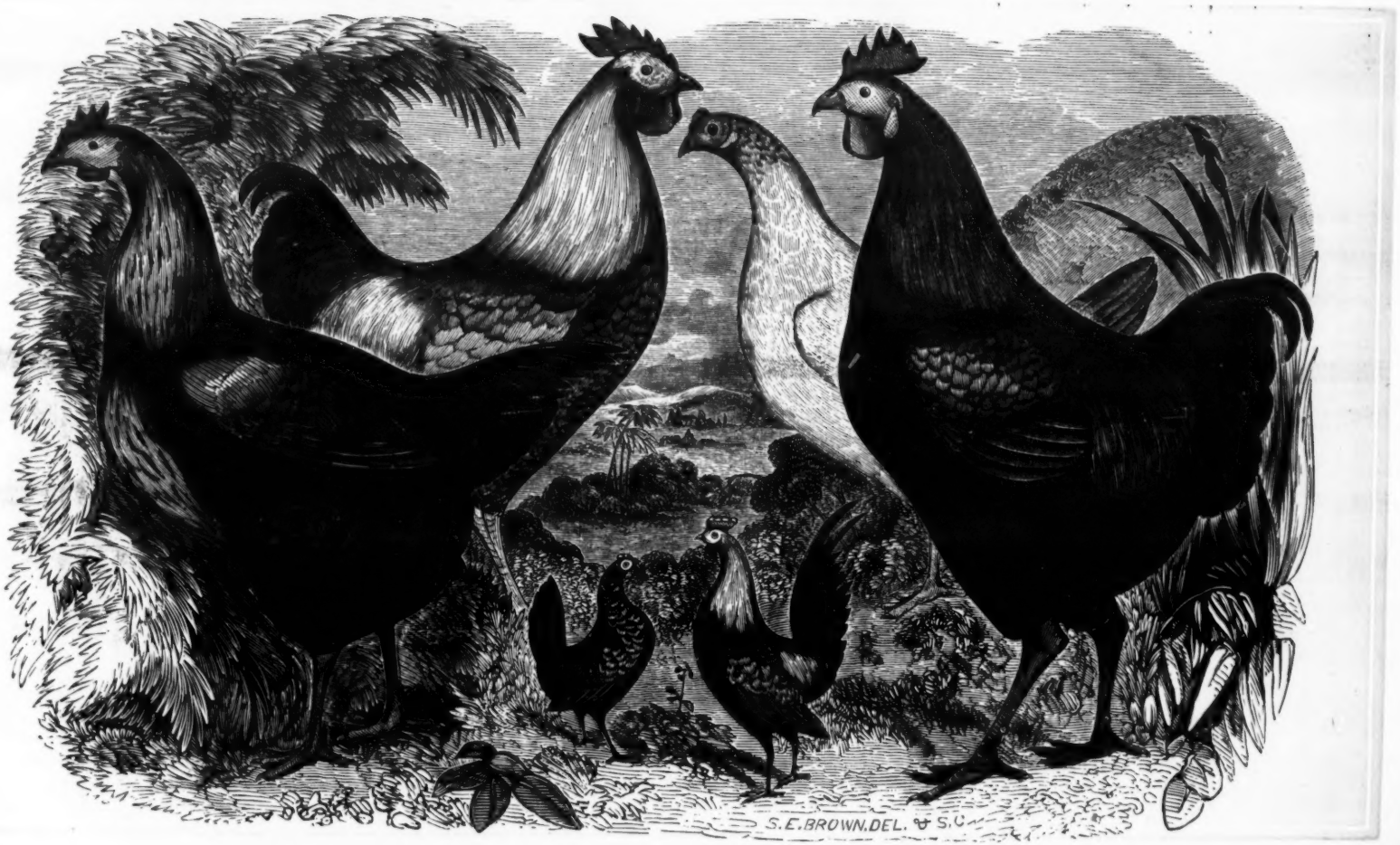
Mode of Instruction. — The Professors will deliver daily lectures during the sessional course, (*of six months in each year,*) on the theory and practice of Medicine, Surgery, and Surgical Anatomy, Physiology, Pathology, and Chemistry. Illustrations and experiments will be conducted in the most advantageous and instructive manner. In addition to the usual course of lectures, the pupils will attend the daily practice of the Infirmary.

The period requisite for obtaining a knowledge of the veterinary art will be regulated by the talents and industry of the pupils; yet all candidates for graduation must have attended two full courses of lectures, and must well sustain an examination in the different branches of veterinary study.

Any donations of money, or preparations adapted to facilitate illustrative teaching in any of the departments, are respectfully and earnestly solicited.

No subscriptions called for unless a sufficient sum is raised to accomplish the object.

False Economy. — The *American Agriculturist* estimates there are ten farmers who waste fifty dollars annually in manure, where there is one who pays a dollar for an agricultural paper, which would show him how to save it.


S.E.BROWN.DEL. & S.C.

For the New England Farmer.

A GROUP OF CHOICE FOWLS.

MR. COLE: Your readers are herewith presented with an engraving of three distinct breeds of fowls, of the Gallus tribe, belonging to Geo. P. Burnham, Esq., of Melrose, Malden. The equals of them cannot, in my opinion, be found in New England.

The engraving is the work of Mr. Samuel E. Brown, No. 50 Cornhill, Boston. Mr. Brown delineated the fowls from life, and, in the completion of the whole work, has shown abilities rarely possessed by one individual.

The engraving was printed "in tint," personally, by Mr. C. H. Freeman, of the firm Devereux & Co., printers, at No. 162 Washington St., who, deservedly, have the reputation of being unsurpassed in all that relates to the art of printing.

The small figures in the middle foreground are the portraits of the Sir John Seabright Bantams, belonging to Mr. Burnham. The plumage of this breed of Bantams is variegated, being black feathers alternated with those of a bright orange color. The tail and wings are black, sometimes shaded or flecked with white. The colors of the hens are not so brilliant as those of the cocks. The Seabright Bantams are much smaller than Bantams of other breeds; the pair belonging to Mr. Burnham weighing, at sixteen months old, but twenty-four ounces the pair.

For a description of the other fowls shown in the engraving, the reader is referred to the letter from Mr. Burnham, which is here inserted.

S. B. MORSE, JR., ESQ. DEAR SIR: The group of my *Cochin China* and *Seabright Bantam* fowls, so admirably portrayed in the picture by Mr. Brown — a copy of which you kindly sent me on the 25th inst. — is life-like, and very satisfactory; and I send you herewith a description of them, which you can use at pleasure.

The two chief figures in the foreground represent a cock and hen of the Cochin China tribe, and as they are somewhat peculiar in their characteristics, I will devote a paragraph to them especially.

The cock is one of six fowls of my own importation, direct from *Canton*, early in the present season. His color is quite dark, the prevailing shade of plumage being a rich, glossy, greenish black, on the breast, sides, and legs; the hackles, wings, back, and rump feathers are of a bright red; his legs are dark; wattles, heavy; eye, very large; prominent comb, and very short tail. He is a splendid bird, not yet ten months old; his weight this day is ten and one quarter pounds.

The hen is a perfect match for the cock, in color and general appearance — dark plumage, (black, saving her neck-hackles,) of very fine form, and one of the rarest birds I have ever yet seen. She is also imported directly from Canton, and was sent me by a gentleman-fancier who chanced to see my rooster, and who considered him a fitting mate for *such* a fowl. I weighed this hen on the 27th of May — *she drew ten pounds, strong*, though she had but just come from the sitting-coop, and was not so heavy by half to three quarters of a pound, probably, as she will be in fair laying condition. A few of her chickens, hatched this spring, have proved rare specimens, for domestic birds.

The other pair of large fowls, in the background of the picture, are also correct portraits of the Royal Cochin Chinas imported by me, last winter, from Dublin, and which have already been fully described in the books lately published, as well as in the "New England Farmer." The pullet therein portrayed I have already spoken of. She commenced laying about the middle of February last; up to the 27th of May, one hundred and four days, she laid ninety-two eggs, and she is now laying daily. Her weight is now eight and one quarter pounds. One of the others which accompanied her from Dublin weighs light nine pounds; the average is about eight and one half pounds.

The *Canton* pullets which I received with the dark cock will weigh from eight to eight and one half pounds each; they are very superior birds, and are uniform in color and general characteristics. The hens are a light brown, with the feathers tipped on barred with black. The legs are yellow, and the forms very handsome. The chickens from this stock are quite uniform, and, thus far, very hardy.

The "Seabright Bantams" are true to the life; and I need only say that the pair shown by the artist are as beautiful samples of this breed as I have ever seen. The joint weight of the cock and hen is but a trifle over a pound and a half; and the latter is now laying vigorously!

I shall be happy to show this stock to yourself and friends, at my new residence in *Melrose*, at any time hereafter, where I *may* have a few choice specimens to dispose of during the coming season. With the assurance that your artist has done himself credit in this beautiful and accurate picture, I am

Yours truly, GEO. P. BURNHAM.

ROXBURY, *May* 29, 1850.

Mr. Burnham, in the foregoing letter, speaks of the dark-colored cock and hen as being Cochin China, although differing in size and color of plumage. The Royal Cochin Chinas are parti-colored, with light-colored bills and legs. The color of the others is very dark, nearly black, with black legs and bills. There is also a great difference in the ear lobes and wattles, both in size and form. In my opinion, the dark-colored fowls are much superior to the Royal Cochin Chinas, yet the Cochin Chinas have no competitors in any other breed of fowls in this country.

There is at the present time a great inclination, on the part of many persons, to give to mongrel fowls the names of well-known and truly valuable fowls.

In the Poultry-Book by Dr. John C. Bennett, on pages 54, 55, and 56, an account of the Shakebag fowl is given, and portraits of fowls imported by the "Tremont House," and kept at the "Samoset House," are shown. Dr. Bennett says, "they are magnificent birds," "they are exceedingly rare in this country, this being the only importation of which I have knowledge."

Richardson says of the Shakebag, "A good many years ago, *there used to be* a variety of fowl much in request in England, called the 'Shakebag,' or the 'Duke of Leeds' fowl, his grace of that name, about sixty or seventy years ago, having been a great amateur breeder of them."

Mowbray, in 1816, says of the Shakebag, "Formerly the largest variety. * * It has been entirely worn out for some years. It was called the Duke of Leeds breed, but it does not appear whether his grace first raised the variety, or whether it arose merely from improving the size of the common dunghill kind, or from any foreign cross. The only one I ever possessed was a red one, in 1784. * * * The breed of Shakebags has been for many years extinct."

Martin says of the Duke of Leeds fowl, or Shakebag, "A breed of game fowls, of enormous size. * * The breed is now extinct."

W. B. Dickson does not mention the Shakebag or Duke of Leeds fowl in the last edition of his work on poultry.

Thus it seems, by the authority of all English writers on poultry, that the Shackbag, Shakebag, or Duke of Leeds fowl has been lost for many years. What apology can Dr. Bennett offer for this *mistake*?

Yours, &c., S. BRADFORD MORSE, JR.

Domestic Department.

To prevent Milk souring during Thunder-Storms. — We have heard great complaints from dairy women, about their milk getting sour during a thunder-storm, although perfectly sweet a short time previous. The following plans, suggested by a correspondent, will prevent this in a great degree: All the pans containing the milk ought to be placed upon non-conductors of electricity, such as blocks of baked wood, pieces of glass, or wood that has been well painted and varnished. The following articles are most easily provided: Beeswax, feathers, and woollen cloth, are also non-conductors, but inconvenient to be used. All these articles will insulate the pans, and prevent the electric fluid from entering, which is the cause of acidity; or is, in fact, the principle of acidity itself. If glass basins were substituted for tin pans, the plan would be better still, and there would then be no necessity for the practice suggested above. The glass would preserve the milk much longer sweet than pans, and the acid would have no effect upon it. We are not aware of any acid that has the least impression on glass, except the fluoric acid. All iron vessels, or vessels compounded of iron, as tin pans, attract the heat very readily, and of course sour the milk; and such is the affinity of iron for an acid, that we doubt much if it is ever washed out entirely. Iron vessels, we are confident, are the very worst that could be used for the purpose; they are even inferior to wood. — *Am. Agriculturist.*

A Mother's Voice. — The editor of the Cincinnati Atlas, after a visit to the Asylum for the Deaf and Dumb, at Columbus, Ohio, relates the following: —

We inquired of an intelligent and modest young lady, who had become deaf from sickness when two years and a half old, whether she could recollect any thing of sounds or words. She answered that she could not.

It occurred to us that there might have been at least one sound which might be remembered even from that tender age, and we ventured to inquire whether she had no recollection of her mother's voice. It will be long before we forget the sweet, peculiar smile which shone upon her features, as, by a quick inclination of her head, she answered, yes.

What a world of thought and feeling clusters around such a fact! In all her memory there is but one sound, and that is her mother's voice. For years she has dwelt in a silence unbroken from without, but those gentle tones of love still linger in her heart. There they can never die; and if her life should be prolonged to threescore years and ten, o'er the long, silent track of her life, the memory of that voice will come, in loveliness and beauty, reviving the soul of weary old age with the fresh, lovely sounds of her cradle hours.

Youth's Department.

Only one Step at a Time. — Horace is a round-faced, white-headed little boy, three years of age. One Sabbath morning, as we came from our chamber, we overheard his mother say, "Here, Horace, my dear, carry this book into your father's study, and lay it on the table." The little fellow took the book, went to the foot of the stairs, and there he stopped. We wish our little readers could have seen him, as he stood gazing up that long flight, from the bottom to the top. Such a look of *discouragement* surely never before came over the countenance of a little boy. He seemed to say, by his appearance, "How *can* I go up all these long steps?"

The watchful eye of the mother immediately saw his trouble, and with a sweet, encouraging voice, she said, "O my son, it is *only one step at a time.*"

And so the little boy found it. When he looked at the long, steep journey, and thought of it *all together*, it seemed a task too great for his tiny feet; but when he thought of it "only one step at a time," it seemed an easy matter. And how many a "hill of difficulty" would disappear, if we would think of it "only one step at a time." The long Sabbath school lesson, the hard sum in arithmetic, the errand a mile off, the big pile of wood to be carried into the house, the bed of strawberries to be weeded, all appear *easy* to accomplish, when we remember it is only one word, one figure, one step, one stick, one weed, at a time.

Whenever, then, little reader, you feel discouraged at some task your mother has assigned you, think of this mother's remark to her white-headed boy, "*only one step at a time.*" You must surely be a faint-hearted little fellow, if *one step* frightens and discourages you. Well, if you can take *one step*, you can take the next, for that is only *one step*, and then another, and so on to the top. Try it, and not be chicken-hearted. — *Well-Spring.*

Duty of Labor. — No man can rise from the workman's rank. Fall he may, and often does, from that state, but to rise above the order the great God has established to govern his world, is impossible. Every man should be a workman, and fill up a workman's rank. He must fill that or a loafer's. He who made the world never made a spot on it for an idler. He never made a man who has to live by his brains alone, or such a one would have been *all* brains. Body and soul, powers physical and mental, are to be used, else they never would have been given; and whoever finds himself in possession of a pair of hands, a set of bones and muscles, may rest assured that he has a command to use them.

Health Department.

Health. — Horace Mann thus discourses of health, in his new book, just about to be issued from the press of Ticknor, Reed, & Fields: —

"Appetite is Nicholas the First, and the noble faculties of mind and heart are Hungarian captives. Were we to see a rich banker exchanging eagles for coppers by tale, or a rich merchant bartering silk for serge by the pound, we should deem them worthy of an epithet in the vocabulary of folly. Yet the same men buy pains whose prime cost is greater than the amplest fund of natural enjoyment. Their purveyor and market-man bring them home headaches, and indigestion, and neuralgia, by hampers full. Their butler bottles up stone, and gout, and liver complaint, falsely labelling them sherry, or madeira, or port, and the stultified masters have not wit enough to see through the cheat. The mass of society look with envy upon the epicure who, day by day, for four hours of luxurious eating, suffers twenty hours of sharp aching; who pays a full price for a hot supper, and is so pleased with the bargain that he throws in a sleepless and tempestuous night as a gratuity. English factory children have received the commis-

eration of the world, because they were scourged to work eighteen hours out of the twenty-four; but there is many a theoretic republican, who is a harsher Pharaoh to his stomach than this; who allows it no more resting time than he does his watch; who gives it no Sunday, no holiday, no *vacation* in any sense. Our pious ancestors enacted a law that suicides should be buried where four roads meet, and that a cartload of stones should be thrown upon the body. Yet, when gentlemen or ladies commit suicide, not by the cord or steel, but by turtle-soup or lobster-salad, they may be buried in consecrated ground, and under the auspices of the church; and the public are not ashamed to read an epitaph upon their tombstones false enough to make the marble blush. Were the barbarous old law now in force, that punished the body of the suicide for the offence which his soul had committed, we should find many a Mount Auburn at the cross roads."

Mechanics' Department, Arts, &c.

THE HYDRO-ELECTRIC LIGHT. — After a period of six years, employed in a series of experiments, conducted upon the most philosophical principles, and continued with indefatigable perseverance, Mr. Henry M. Paine, of Worcester, has completed his "Magneto-electric Decomposer,"—an ingenious apparatus for evolving hydrogen and oxygen gases from water, by the agency of electricity, generated by mechanical means. The gases thus obtained may be used for light, heat, and motive power, and have already been practically tested for the two first named purposes, on a considerable scale, with wonderful effect.

At his residence, on Tuesday evening, April 23, Mr. Paine exhibited the operation of his invention to a number of gentlemen of Boston and Worcester, some of whom have considerable experience in the gas business; and others have taken great interest in plans and projects having in view the production of artificial light at cheaper rates than it can be furnished by the means hitherto employed by gas manufacturers. Mr. Paine had his house brilliantly lighted up, although he used only one small burner for each room. The light was exceedingly strong and white, and so pure that the most delicate shades of blue and green, in some colored prints, could be instantly distinguished at a distance of several feet from the burner, (a common gas-burner,) which was supplied with gas from a pipe whose diameter did not exceed one quarter of an inch.

At the same time that the light was being exhibited, the mode of using the gas for heating was also shown. A small jet of *pure hydrogen*, between two circular plates of iron, raised a few inches from the floor, was lighted, and in a few minutes an equal and genial heat was diffused throughout the apartment. Thus the astonished party had the light and heat together, supplied from the same source below, and their expressions of admiration were unbounded; nor were they abated when they were led down into the cellar to examine the exceedingly small machine by which the gas was made. The box containing it was about eighteen inches square and eight in depth. We cannot give the details of the interior of the machine, but will simply state that, as its name indicates, it evolves magneto-electricity by purely mechanical action. From the above-mentioned box there ran flat copper wires into the decomposing jar, which was about two feet in height, and six or eight inches in diameter, partly filled with water; in this jar, by the action of the electricity just spoken of, pure hydrogen gas *alone* was formed from the water, whence it passed into two gasometers or reservoirs about the size of a barrel each. The pole, at which oxygen gas is liberated, on this occasion passed into the ground, so that hydrogen only was evolved by the action of the machine. The process of carbonizing the hydrogen for illumination is exceedingly simple, and was open to view. It is very cheap, so much so, that Mr. Paine says that the cost of carbonizing the gas he has burned in his house in three burners, every evening for a week, has not yet amounted to *one cent*. The hydrogen is used for the general purposes of light and heat, and the oxygen can also be secured in a second jar, and may be used with the hydrogen to produce the "calcium light" for lighthouses.

Mr. Paine has also discovered a principle by which he can regulate the quantity of electricity to be discharged into the decomposing jar. A large machine has recently been perfected by Mr. Paine, of sufficient power to supply three thousand burners with gas; it is set up in the Worcester Exchange, and only occupies a space of three feet square by six inches in height.

One cubic foot of water will make two thousand one hundred feet of gas; and a weight of sixty-seven pounds, falling nine feet in an hour, will make, from this large machine, one thousand feet of gas. The apparatus can be applied to gas works o any kind, and be used with any of the gas fixtures at present in fashion. — *Boston Post.*

SELECTION OF SOILS FOR ANALYSIS.

We are often asked how soils should be selected for analysis, whether entirely from the surface, or part from below, what quantity is required, &c.

As earth is not a crystallized substance, whose composition may be ascertained by its geometrical form, but is heterogeneous in its character, we must be careful that the sample selected should represent an averaged quality; and to do this, it will be necessary to bear in mind that the lighter and soluble portions of soils are both to be found in excess in low parts of fields or at the bottom of slopes, and indeed, even accidental deep furrows in flat fields may, by a single shower, be rendered the recipients of more than a due proportion of particular constituents.

Other parts of a field, by being underlaid by a tight subsoil, may remain wet for a sufficient length of time to induce the decomposition of some of the integrants of the soils, and subsequent evaporation of the more volatile portions. For the proper selection of a specimen of soil for analysis, where the results obtained are to enable the cultivator to select the proper manures for his crops by knowing the deficiencies of the soil, it is necessary to select from a large number of places, and at different depths, mixing them all together, and then taking a pint or less of this mixture as the average of the surface soil of the field.

A sample so selected, although it cannot be expected to represent an exact average of the quality of the surface soil, will still be sufficiently near for all practical purposes.

The above directions apply particularly to the surface soil, or that which has been freely worked, and which has sustained vegetables; but when the advice of a consulting agriculturist is intended to be asked in relation to the abilities and proper crops for such a soil, and the manures required for its greater fertilization, &c., then an analysis of the subsoil should also be made. By the subsoil, is meant that under portion which has not previously been disintegrated by the plough; and the parts of the subsoil selected for analysis should be equally assorted in position and depth, to at least as great a depth as could be

reached by a subsoil plough. These selections of soils for analysis should never be made soon after a manuring, as the soluble portions will pervade the soil in more than dependable quantities, and thus lead to errors.

We often receive copies of analyses, with a request to advise modes of culture, manuring, &c., &c., and too often are compelled to visit the locality, simply because the applicant has not been sufficiently explicit in his communications. We should receive, accompanying the analysis, a description of the farm generally — such as the fertilizing materials upon it, marl, muck, &c., &c., and when known, the class of rocks pervading or underlaying the subsoil; also, some account of the previous mode of manuring, depth to which it has been ploughed, elevation above the sea, and indeed all facts which may in the most remote degree affect the economy or requirements of the farm. — *Working Farmer.*

AGRICULTURAL EDUCATION.

Dr. Lee, superintendent of the agricultural department of the Patent Office, in his report to the commissioner making suggestions in reference to the ways and means now available for improvements of American agriculture, offers the following remarks on agricultural education:—

Since 1823, when Judge Buel introduced the first bill to establish an agricultural college in the state of New York, by legislative aid, constant efforts have been made to render the study of rural economy as a *science*, not less than its practice as an *art*, popular in this country. Twenty-seven years have now elapsed, a whole generation has passed off the stage, and New York, with her five hundred thousand cultivators of the soil, is still without the first agricultural school worthy of the name; nor is any other state in a better condition. Dark as this view of agricultural education really is, it is the darkness that precedes the dawn of a bright and happy day. Men who have labored for the improvement of agriculture, and the elevation of agriculturists, for a quarter of a century, with little of hope, and less of pecuniary reward, now realize the beginning of an auspicious change in public sentiment. Thanks to agricultural journals and societies, the people will soon discover that labor and capital devoted to tillage and husbandry are as worthy of legislative consideration, as labor and capital employed in mining, commerce, and manufactures. So soon as this truth shall be fairly comprehended, the long struggle of the friends of improvement will be crowned with success, and the victory won over both ignorance and its traditions.

It is, indeed, wonderful how long those enlightened, reasoning farmers, who, like Washington, cherish a due respect for their high calling, have had to beg, and beg in vain, of state legislatures, and of Congress, for a little assistance to prevent the universal impoverishment of American soils. Whatever has been done to arrest the exhaustion of arated lands, has been effected not only without due aid from government, but in spite of a mistaken policy, which encouraged the removal of all the elements of bread and meat from cultivated fields, and their speedy transportation beyond the possibility of restitution. Neither the earnest recommendation of the illustrious farmer of Mount Vernon, nor the prayers of two generations of agriculturists, nor the painful fact that nearly all tilled lands were becoming less and less productive, could induce any legislature to foster the study of agriculture as a *science*. Happily, this term, when used in connection with rural affairs, is no longer the subject of ridicule.

Some pains have been taken in this report to prove that one thousand millions of dollars judiciously expended, will hardly restore the one hundred millions of acres of partially exhausted lands in the Union, to that richness of mould, and strength of fertility for permanent cropping, which they possessed in their primitive state.

The continued fruitfulness of the earth is an interest far greater, and more enduring, than any form of government.

If the twenty-two millions of people now in the United States may rightfully exhaust the natural fertility of one third of the arable lands of the country, the forty-four millions who will be here twenty-five years hence may properly consume the productiveness of the remaining two thirds of all American territory.

A great principle is involved in the science of agriculture, which reaches through indefinite generations, and forms the basis of all possible improvements, and of the highest hopes of our race. All advancement is impracticable in a country that closely approximates the condition of a desert.

As a nation of farmers, is it not time that we inquire by what *means*, and on what *terms*, the fruitfulness of the earth, and the health and vigor of its invaluable products, may be forever maintained, if not forever improved?

These are questions of universal concernment, to the careful and rigid investigation of which no man should refuse to lend a listening ear. A governmental policy which results in impoverishing the natural fertility of land, no matter by what popular name it is called, must have an end. It is only a question of *time*, when this truly spendthrift course, this abuse of the goodness of Providence, shall meet its inevitable punishment. To show the necessity of reform, a plain estimate has been made, in the chapter on "agricultural statistics," to prove that we annually waste enough of the elements of bread, without which, not the first kernel of corn can be formed, to produce one thousand million bushels of this important staple.

The Board of Agriculture of Ohio estimates the crop of corn in 1849, within the limits of that state, at seventy million bushels; and it will hardly be extravagant to say, that the farmers of Ohio, Indiana, Michigan, Illinois, and Wisconsin export a million tons of breadstuffs and provisions, where they import one ton of the atoms drawn from their virgin soils, to form agricultural products. Can it be said, in truth, that a million tons of bread and meat are produced from *nothing*? Will it be contended that the earth, within the reach of good ploughing, contains an unlimited amount of the precise things consumed to make the plants, whose organic and inorganic elements are taken from the soil, and never restored? If this be true, then all fertilizers are not only unnecessary, but absolutely worthless. This cannot be so; for lands that seventy years ago produced from twenty-five to thirty-five bushels of wheat in the state of New York, now yield only from six to nine bushels per acre; and in all the old planting states, the results of exhaustion are still more extensive, and still more disastrous.

A lack of mental culture and discipline is the most serious impediment to the diffusion of agricultural science among the mass of farmers. Its language is to them an unknown tongue. Hence the most sublime truths in the economy of nature are shut out from the popular understanding. It is feared that this will ever be the case until schools designed to teach those branches of learning which the practical farmer greatly needs, but does not possess, are established and maintained throughout the United States.

So long as we refuse to plant the seed, it is folly to expect a rich harvest of knowledge.

We over-estimate the value of mere physical strength, like that of the ox or mule, and underestimate the intrinsic worth of cultivated, well-developed reason, in practical agriculture. No inconsiderable degree of mental culture must precede all scientific tillage and husbandry. An oak is not matured from an acorn in a day, nor in a year; nor is it possible to form, in a single generation, a universally educated and highly improved race of men. Such improvements, to be general, and fixed in a people as a distinguishing feature in their character, must be deeply impressed on several successive generations.

As a class, farmers have few advantages for being well informed in the rapid progress now making in the economical improvement of soils, cultivated plants, and domestic animals. This lack of opportunity is a serious misfortune, and leads to this practical result: With 5,000,000 farm-laborers—2,700,000 in the slaveholding, and 2,300,000 in the free states — American agriculturists so misdirect this immense power of production, that the injury done to 100,000,000 acres of land is nearly equal to all the apparent net profits on the whole rural industry of the country.

To illustrate an important fact, as well as principle, let us suppose that a farmer produces crops worth $1000, and that they cost him, including all expenses for labor, wear of implements, interest on capital, &c., $850. Nominally, he has a profit of $150; but it often happens, that, if he undertakes to replace in his cultivated fields as much of potash, soda, magnesia, phosphorus, soluble silica, and other elements of crops, as both tillage and cropping had removed, it will cost him $175, or $200, to effect that purpose. It is only by *consuming the natural fertility of the land* that he has realized any profit.

In a national point of view, all labor that impoverishes the soil is worse than thrown away. No fact in the science of political economy is more important than this. To reduce a field, which in its virgin state produced forty bushels of corn per acre, down to twenty in ten years, and then cultivate it forty years, and harvest only twenty bushels per acre in place of forty, is equal to a loss of four hundred bushels of corn per acre in the aggregate, or half the diminished product, without any equivalent whatever. Thus to impoverish land is to wither the muscles of both man and beast employed in its tillage. Human toil is often praised for being highly *productive*, when, had the whole truth been known, it would have been seen to be remarkably *destructive*. Labor never creates a particle of new matter by ploughing deep or shallow; but it frequently places the elements of grain, cotton, and provisions beyond the reach of all scientific farmers who may live hereafter, and find the soil wanting in the raw material for making human food and raiment.

Is it not the duty of government to diffuse among its citizens a knowledge of the true principles of tillage, and impress upon them the obligation which every agriculturist owes to posterity, not to leave the soil he cultivates in a less fruitful condition than he found it?

When we understand better the importance of *concentrating* labor instead of *scattering* it; when we shall come to estimate duly the superior profit of "a little farm well tilled," over a great farm half cultivated and half manured, overrun with weeds, and scourged with exhausting crops, we shall then fill our barns, and double the winter food for our cattle and sheep, by the products of our *waste lands*.

THE CURCULIO.

This insect has become very destructive to plums, particularly, and as it is a great evil, which should receive more attention, and which requires further investigations, the following recent communication from Dr. Eastman Sanborn, of Andover, to the Puritan Recorder, will be read with interest and profit. In our first volume, we introduced Dr. S. to our readers, in relation to this subject. His thorough and numerous experiments on this subject give an importance to his articles.

A few years only have passed, since the curculio, or *Rhynchaenus Nenuphar*, was known as the destroyer of fruit. At its first appearance, its demands, like those of many other invaders of the vegetable kingdom, were modest and unpretending. It seemed quite satisfied with visiting here and there tender plum-trees, and depositing its egg in their fruit.

But, alas!

"The young disease which must subdue at length,
Grows with its growth and strengthens with its strength."

The present year this invader holds almost the entire kingdom of *Pomona* in subjection. Apples, pears, peaches, plums, cherries, apricots, and nectarines have fallen a prey to it. What further encroachments it is to make on the productions of the soil, in 1850, and in succeeding years, may well excite the most serious apprehensions. Individuals and associations, if not legislatures, should put forth such exertions as will exterminate it.

In compliance with your request, that all experiments calculated to give valuable information upon this, as well as other branches of agriculture and horticulture, may be reported, I here submit a few examinations made in 1849. If they suggest thoughts, or lead to discoveries which shall have a tendency to preserve to us the golden productions of our fruit-trees, and thus gladden the heart of honest industry, and reward labor, my object will be abundantly accomplished.

May 18. Plum-trees in my vicinity were in full bloom, and, to be in season for the curculio, I had a platform built on cross-bars and stakes, four feet high, covering the entire surface of the earth under a Green Gage and a Bolmar's Washington. These trees stood nine feet apart. The expense of the materials was less than two dollars.

From this date to Wednesday evening, June 6, the trees were jarred morning and evening. Thousands of other insects, perfectly innocent, but which are often mistaken for curculio, fell upon the platform, but not a solitary insect of this tribe was to be found above or below it. The wind was west and north-west. The next morning, June 7, on jarring the trees at six o'clock, though jarred so thoroughly the previous night, a whole shower of curculio fell upon the boards, and were secured in network cages for exhibition and experiment.

At seven o'clock P. M., about a dozen more were taken, and "shown up" in due form. I speak of this operation as the duty of all who have the opportunity of exhibiting "these foxes, these little foxes, that spoil our tender fruits," till all fruit-growers may recognize them wherever they see them. At this time, the plums were about the size of the marrowfat pea.

June 8. At six o'clock A. M., I jarred off five curculio; at seven o'clock P. M., six; on the morning of the next day, two; but at night, none. Between this time and the evening of the 15th, none were taken. At the last date I caught one; the next morning, two, and on the same day, one. On the morning of June 18, another shower of a dozen

fell at the first jar; in the evening, none. On that day, in the morning, two were caught, and in the evening, the same number.

The plums were at that time nearly half their full size; and those that were first bitten began to fall. On breaking them open, I found that the grub had worked its way over nearly the whole circumference of the kernel, and was about ready to enter the earth and assume its beetle form. I prepared glass jars, partially filled with earth, for their reception, in such a manner as to render visible all their changes. I also prepared jars and kegs of earth for the apple, pear, peach, and cherry. On June 20th, in the morning, no curculio fell from the trees, but at evening I found one, and deposited the bitten fruit for experiment. On the 21st, the temperature being 90° at three o'clock P. M., I caught one curculio. On the 22d, three in the morning, but none at night — the thermometer standing 100° at one o'clock, 90° at four o'clock, and 85° at six o'clock P. M.

On the 23d of June, three curculios were caught, the wind being west and south-west. A few rose-bugs (*Cetonia aurata*) appeared on the blossoms of the Charryanthus, (?) and on the leaves of the Sweet-water Grape. I secured them in network cages, to observe their habits, means of reproduction, &c. I found also worms coiled up in the apple-leaf, which are very numerous, and deposited more fruit bitten by the curculio.

On the 24th, we had a strong west and south-west wind, and I found no curculios. On the 25th, the wind blew from the west and north; and I observed that the blossoms and foliage of the Charryanthus were nearly covered with rose-bugs. I placed pans of hot water underneath, and jarred them off into it. I then gave some of them to my fowls, which did not seem to relish them, and threw the remainder into my fish-pond, where they were eagerly devoured. After the appearance of the rose-bugs, I found but few curculios, not more than three or four from June 25th to July 17th.

Finding that my plums were out of danger, I removed the platform, and had the felicity to see my trees bowing to the earth and loaded, as many persons of taste and judgment declared, with several bushels of the finest Gages and Washingtons.

I speak this, not boastingly, yet confidently, as the result of my experience. Two other Gages, which blossomed equally full, yielded but one perfect plum, though subjected to a great variety of *popular* experiments, quite too numerous to be mentioned.

Reproduction of the Curculio.

The plums which have been bitten by this insect, and deposited in jars June 28th, produced, on the 28th of July, one curculio, on the 30th, three; and the number increased for several successive days. These jars were set in a window with a southern aspect, but shaded from the sun. On the 5th of August, the plums deposited in other jars at the same time, but sunk in the coldest location in the garden, produced curculios. I attended carefully to this experiment, to satisfy myself and others in relation to a question asked by Hon. Mr. Calhoun when the subject was discussed last winter at the agricultural meetings.

It was then intimated that these insects come from the earth in the same season in which they enter it, and this was attempted to be proved by the fact that they had been seen to, when buried in earth in a jar. But the inquiry was made, whether this fact was not owing to their exposure in the jar to a warm temperature, and whether, if buried in the cold earth, they would not remain there during the winter.

However cold the position, or late the deposit of these grubs, in about six weeks they return to the surface perfectly furnished, winged, and equipped for their work of destruction. I come to this conclusion from many experiments, and much research. For two seasons I have had an opportunity of witnessing the daily changes of this insect, from the moment it leaves the fruit till it reappears. I know the order and time of its appearance, and have it preserved in twelve or fourteen of its different stages, showing what changes it undergoes from day to day.

From the great variety of jars and positions in which the grub of this insect was preserved in 1848, not one curculio has appeared this year, (1849.)

In the latter part of May, broad covers were placed under trees which were subject to their ravages last year, from which the fruit fell and deposited them in the ground, but not a single curculio was caught in them, proving conclusively that they do not come up from the ground, as is generally supposed.

Also, peaches bitten by the curculio were put into a keg half filled with earth, and placed in a cool, shady place in my garden. In due time, thirty or forty curculios made their appearance beneath the network which covered the top of it. The decayed fruit was removed, and the insects kept confined as before. In three or four weeks, all of them were found dead on the surface of the earth, none having reëntered it. These, and many similar experiments which I need not at present describe, satisfy me that neither the curculio nor its grub burrow in the ground during the winter; and, consequently, that the common practice of guarding against its ravages by various operations in the soil, rests on a false theory, and is productive of no valuable results. Truth alone can make us free, and crown our efforts with success.

If every fruit-grower will examine carefully the habits of this insect, and report the result of his labors, we may yet see them subjected to human control.

> "Many a shaft, at random sent,
> Finds mark the archer little meant."

I am permitted, through the courtesy of Judge Greenleaf, of this place, to relate to you a very interesting and successful experiment, one that is worthy of the imitation of all our cultivators, and capable of application to various kinds of fruit. As soon as his young apples began to fall, he employed boys to pick them up from day to day, and put them in barrels by the sunny side of his house. On emptying them after a few days, he found at the bottom of the barrel a large handful of small white grubs or *Nymphae*. From all the barrels he obtained a full quart, which were destroyed with hot water, except a handful which he put into a glass jar half filled with earth, into which they immediately descended, and from which, in due time, reappeared *bona fide Rhynchaenus Nenuphar*, or *Plum Weevil*, alias curculio, and as a curiosity they were exhibited to very many.

My neighbor, Mr. A. W. Pike, also brought me a vial swarming with curculio, which he obtained from cherries bitten by this insect, and deposited as above described. I have the results of many other experimenters, all affording materials for valuable discoveries.

Dear sirs, if I had not already taxed your patience too long, I would describe similar experiments on the rose-bug, apple-leaf worm, and other insects injurious to our fruits, but I will defer this till a future occasion, and will close with an interesting fact, of which I had nearly forgotten to speak — the rearing of curculio from the black wart, which often appears on the plum-tree. I had, at one time, living specimens from this source; also from apples, pears, plums, peaches, and cherries, all of which, examined through a powerful microscope, presented the same general appearance in form, size, and color.

BEES AND HONEY.

I have seen a communication in your paper, signed "S. W. R.," Darlington, Beaver county, Pa., on removing or transferring bees from hive to hive, for the purpose of cleansing from worms, or taking the honey. The way stated may be good, but I think my plan better. It is said to be the French mode, as practised by the honey raisers of France — that is to say: take an empty gum or hive precisely of the same size and dimensions of the one you wish to change or transfer, turn the full hive bottom upwards, and place the empty one on top; tie a cloth around the middle to prevent the bees from coming out where the two hives join; then take a stick and crack around the full hive, and the bees will all run up into the empty hive. By putting your ear close to the hive you can hear them passing up. When you have reason to believe they are principally all up, lift off the top hive, set it down on the bench, and take away the hive with the honey, some eight or ten yards from the bee bench, and take out the honey. What bees may have adhered to the honey-comb will fly back to the new hive. In this way you need not kill a single bee intentionally. I have practised this plan with success when the season is good for honey-making, which is not every year. Bees are like every thing else; there are good and bad seasons for them. Sometimes they will hardly make enough to keep them through the winter, and other years they will make as much again as is necessary to keep them. When I have no other object in view than the honey, I rob them in this way from July till August. They will, if a good season, as I before observed, fill the second hive before frost. There are various opinions as regards the size of the beehive. I generally make them from eight to twelve inches square. The proper time for transferring them is early in the morning, or when it is raining, as the bees then are all in the hive. T. M.

New Castle City, Del., 1849.

— *Dollar Newspaper.*

BEANS.

There is, perhaps, nothing grown by the farmer more profitable than white beans. The small, round kind is preferred to any other, and may be raised as easy as other kinds. The labor required is not as much as some suppose. Beans may be raised with less labor than a crop of corn. An acre will yield from twenty to thirty bushels, and as a bushel is worth from $1 25 to $1 75, the straw and pods being the best kind of fodder for sheep, there can be no more profitable crop grown. It is a mistaken idea to think that it will not pay to plant beans on good soil. They will grow better than any thing else on a poor one, but they will yield much more abundantly on good. Beans grow best on gravelly soil, neither wet nor cold, but moderately moist. But they may be planted to advantage on any ground where corn will grow. From an experience of six years, I have adopted the following method of culture: I mark the field, after being ploughed in furrows about one foot or a little less apart, and drop four or five beans in a hill, and then cover slightly, as the beans require all the heat of the sun to germinate quickly. I plant from the 10th of May to the 20th. They generally want but one hoeing, unless the ground is very grassy, when they require two. When sufficiently ripe,—of which the farmer must be the judge,—I pull them, throwing four rows together, and let them lie a day or two to dry, when I draw them on a sled to the barn, and thresh with a flail. I am careful not to let them lie long before winnowing, as, if they are not perfectly dry, they mould or turn black, which renders them worthless, except for sheep. It is best after winnowing to spread them on a floor until they are perfectly dry, when they may be put in barrels or bins without danger. Choose a time when rain may not be expected, to pull beans, for if they become wet they may be injured. — *Selected.*

LIGHTNING RODS.

Why do not the farming portion of our community pay more attention to lightning rods? Their utility, and the trifling expense of putting them up, are generally acknowledged. Any man, with a little assistance, can accomplish the work. Procure a rod of sufficient size, say of three quarters of an inch in diameter, and attach it to your building, or to a lofty pole beside, being careful that it passes through good glass insulators, where it is fastened to the building. The parts of the rod had better be connected by screws than by links, as the latter are apt to become rusty or displaced in time, and thus the continuity of the rod is broken. The rod should terminate in a sharp silver point at the top, and in moist ground beneath, which varies with different soils, but which, during the dry summer months in our latitude, is not less than four or five feet beneath the surface. A rod put up in this way will effectually protect a circular space around it whose radius is equal to twice its height above the building; e. g., if the rod extends ten feet above the building, it will protect a space of twenty feet around it on every side. Conductors carefully put up will scarcely fail to secure their purposed end, and thus be of important service. Let the farmer think of this, and profit by the reflection in this season of comparative leisure, this period of the year so favorable for their erection. M.

Mercer Co., N. J., 1849.

— *Dollar Magazine.*

AN IMPROVEMENT IN BLASTING.

We have lately seen a very simple invention of Mr. Thomas S. Speakman, of this city, which, as an improvement in the operation of blasting rock and coal, seems to be founded upon a correct principle, and in practice is said to produce very important and satisfactory results. In blasting, the hole bored is usually widest at the top, and the rock, if very hard, or more obstinate than the tamping, or earth which is filled in to confine the powder, will cause the powder to blow out vertically in the direction of the least resistance, without producing the effect intended. In the invention of Mr. Speakman, the powder is contained in a conical or wedge tube. The greater body of the powder being at the bottom of the tube, the pressure against the tamping is reduced to the surface of its upper point or edge, throwing the whole force of the explosion laterally, or against the sides of the rock to be split, and of course giving it the greatest possible effect, the same as driving a wedge. The tube is made of stiff waterproof paper, and it may be so placed as to split the rock in any direction desired. It is very cheap in its construction, and requiring less powder, saves enough cost, in this particular alone, to more than pay for the use of it, besides doing double the amount of effective work. — *Dollar Newspaper.*

To catch Rats. — Set a common fox trap; over which spread a piece of cotton or linen cloth, sufficiently large to cover, and sprinkle some meal over the pan — and you *have* him; at least I did. — *Genesee Farmer.*

NOTICES OF PUBLICATIONS.

Elements of Agriculture, by J. P. Norton, M. A., Professor of Scientific Agriculture in Yale College. Albany, N. Y.: H. Pease & Co.—This is a neat volume of 208 pages, 12mo., by one whose reputation for agricultural science stands high, and whose writings on this subject we have read with interest and instruction. We have not yet had an opportunity to peruse this work. We refer the reader to a notice on page 187, by a gentleman distinguished for his zeal and intelligence in the cause of agriculture.

Proceedings of the Second Congress of Fruit-Growers. — We are indebted to Hon. Marshall P. Wilder, (president of this association,) for a copy of this work. It is a large pamphlet of 110 pages, containing a great variety of valuable information to the fruit-grower. We shall review the work, and present our readers with the most important facts that it contains.

The Philosophy of Electrical Psychology; in a Course of nine Lectures; by Dr. J. B. Dods. New York: Fowlers & Wells; 168 pp.; stitched; 25 cts. — This work is an able exposition of a new and interesting, and apparently a mysterious science, which shows the philosophy of disease — the connecting link between *mind* and *matter*, and their reciprocal action upon each other. To the philosopher, the nice observer, and the physician, it is a subject of great importance.

Der Amerikanische Bauer, or The American Farmer. — This is the name of a neat monthly work, in the German language, published at Harrisburg, Pa., by J. M. Beck, at one dollar per year. A German friend, who appreciates this work much better than we can, considers it a valuable publication. It is the only periodical of the kind, published in this country, in the German language, and we trust that those for whom it is particularly designed, who are distinguished for their intelligence, industry, and economy in the great rural art, will give it a liberal support.

The Journal of the New York State Agricultural Society. — This is a monthly publication, in pamphlet form, containing the proceedings of the society, and executive committee, and such communications and articles of interest as may be received by the society.

Flowers. — Spring flowers, breathing their soft perfumes, touch us like the spirit of poetry. The soul is renovated while we wander among verdant hills and dales, profusely spread, from the topmost rock to the lowest marsh, with these vernal offerings. Even the infant, gambolling on the green, seizes, with rapacious grasp, the variegated blossoms, sensible of their sweet odors and beautiful hues. E. P. H. — *Student.*

A wise man makes more opportunities than he finds.

OUR HOMESTEAD.

BY PHŒBE CAREY.

Our old brown homestead reared its walls
  From the wayside dust aloof,
Where the apple-boughs could almost cast
  Their fruitage on its roof;
And the cherry-tree so near it grew,
  That when awake I've lain,
In the lonesome nights I've heard the limbs
  As they creaked against the pane;
And those orchard trees, O, those orchard trees!
  I've seen my little brothers rocked
In their tops by the summer breeze.

The sweetbrier under the window sill,
  Which the early birds made glad,
And the damask rose by the garden fence,
  Were all the flowers we had.
I've looked at many a flower since then,
  Exotics rich and rare,
That to other eyes were lovelier,
  But not to me so fair;
For those roses bright, O, those roses bright!
  I have twined them with my sister's locks,
That are laid in the dust from sight!

We had a well, a deep old well,
  Where the spring was never dry,
And the cool drops down from the mossy stones
  Were falling constantly;
And there never was water half so sweet
  As that in my little cup,
Drawn up to the curb by the rude old sweep,
  Which my father's hand set up;
And that deep old well, O, that deep old well!
  I remember yet the plashing sound
Of the bucket as it fell.

Our homestead had an ample hearth,
  Where at night we loved to meet;
There my mother's voice was always kind,
  And her smile was always sweet;
And there I've sat on my father's knee,
  And watched his thoughtful brow,
With my childish hand in his raven hair —
  That hair is silver now!
But that broad hearth's light, O, that broad hearth's light!
  And my father's look, and my mother's smile,
They are in my heart to-night.

"You labor overmuch on your composition, doctor," said a flippant clergyman to a venerable divine. "I write a sermon in three hours, *and make nothing of it.*" "So your church says," quoth the doctor.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

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